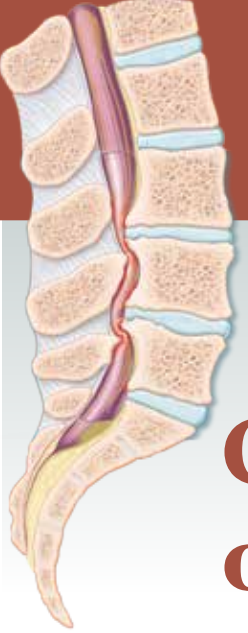

Community Resources for Management of Back Pain

ABSTRACT

Back pain is a community level health problem because of the high prevalence and burden on patients, health care and society. Many aspects of back management, such as exercise and psychosocial stress management, are suitable for a community model of care. Community models for back pain are in their infancy but lessons learned from other chronic diseases can be applied and will be discussed. This review will discuss existing evidence-based community programs, such as Exercise is Medicine® and the Stanford Model, that support exercise and self-management, and their relevance to low back pain.

KEYWORDS: Back Pain, Community Model of Care, Self-management, Exercise, Lifestyle risk factors

CME Pre-test Quiz

Introduction

Because of the high prevalence, back pain is a community level health problem.[1] Back pain not only impacts an individual's quality of life and daily activities, but also increases annual healthcare and societal costs by billions of dollars.[2]

Several evidence-based resources published by Health Quality Ontario are available to assist with the management of back and chronic pain.[3] In general, these guidelines provide management recommendations for the clinical exam, the appropriate use of imaging, prescribing analgesia, appropriate reassurance and advice to stay active, exercise, and psychosocial support. Although many of these recommendations require action from medical practitioners, for optimal care the trend is to promote patient self-management.

Despite the societal burden of back pain, there are inadequate resources available for health care practitioners to assist patients.[1] This is especially true in a pub-

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lic health system where there are long waitlists for specialists and advanced imaging. For those who live in rural areas, allied health resources such as physical therapy and/or psychology are often limited, too costly or not covered by health insurance, or not easily accessible.

Some back pain interventions, such as analgesia prescription, are suited to the traditional medical model of care; other approaches such as exercise are equally appropriate for a community model of care. There is a need to identify community resources that assist practitioners in providing patients with the skills to manage their back pain.

Although the community model of care for back pain remains in its infancy, back pain shares many risk factors particularly physical inactivity with other chronic diseases. The purpose of this review is to discuss existing community models of care that support exercise and self management and to examine how these programs can be used to help manage back pain.

Barriers and Facilitators to Promoting Community Resources among Health Care Practitioners

The evolution of sedentary lifestyles and other risk factors, such as obesity, have led to an increase in chronic health conditions. Increases in healthcare expenditures put a strain on both the individual and the healthcare system. The management of these issues often falls outside the realm of the traditional medical model of pharmacological or surgical intervention and can require practitioners to access community resources on an ad hoc basis. Since it is an essential component of managing back pain, this article focuses on exercise and the available community resources.

General fitness and advice to stay active are well accepted recommendations in both back pain and chronic pain guidelines3. Reviews suggest that any general exercise program may be as efficacious as a course of back-specific exercises. Despite this, most back pain patients referred for tertiary assessment have not received this recommendation.[25] Referral to non-specific community exercise programs, rather than to "professional" venues, could address this problem.

Physician misconceptions can hinder referral to community exercise programs. Providers assume, without evidence, that patients will be unwilling or unable to engage in physical activity.[4] There may be caution in recommending physical activity because of fear that it may be too strenuous or overwhelming for the patient. Especially as it relates to pain, there is the issue of "hurt vs. harm"; the presence of pain does not necessarily mean

that the spine is being damaged. Overcoming this barrier requires considerable time to educate the patient and confidence on the part of the clinician that it is, in fact, safe for the patient to proceed with exercise. The practitioner may not want to jeopardize a positive relationship by advising patients how they should spend their free time.

Haussmann demonstrated that a further barrier is the healthcare practitioners' lack of familiarity of the topic in general, making them feel insecure about giving specific advice for exercise.[4] These obstructions exist in part due to the lack of information available to clinicians to distribute to their patients combined with their inexperience in promoting physical activity.

Exercise is Medicine®

Because of overwhelming evidence that physical activity plays a significant role in the management of many chronic health conditions, Exercise is Medicine®, a global health initiative, was founded in 2007. It aims to address the barriers that hinder referral to community exercise programs. Their vision is "to make physical activity assessment and promotion a standard in clinical care, connecting health care with evidence-based resources for people everywhere and of all abilities."

Exercise is Medicine® provides an educational platform to help mitigate the apprehension arising from a lack of knowledge. It provides evidence-based assessment tools and educational materials for both the patient and the provider. Resources include pamphlets containing ideas on increasing weekly physical activity as well as back pain specific activity suggestions. This program addresses the lack of time available to the practitioner to accumulate resources for their patients. Table 1 summarizes the recommendations for practitioners compatible with the Exercise is Medicine® approach and supplies a roadmap for engaging community providers.

Heart Wise Exercise Program

Engaging resources outside the scope of usual medical referrals requires the primary care provider to identify certified community providers. The Heart Wise Exercise program and accompanying certification was developed to address this concern. Developed by University of Ottawa Heart Institute and expanding across Canada, it serves as a bridge between hospital and community exercise programs. Since 2012, it has supported chronic conditions beyond cardiovascular diseases and provides a standardized certification to create a safer environment for physical activity. Heart Wise Exercise partners with local organizations to facilitate regular exercise programs that help prevent or limit the effects of chronic

Table 1: Template for Community Physical Activity Resource that Can Be Customized Locally* (See Table 2 for National Websites)

Resource	Examples	Considerations
Places to Walk, Ride Bike etc.	Trails Malls Parks	Free Walking Poles to Support Back Weather
Community Centres / Fitness Clubs	YMCA JCC (Jewish Community Centre) University Fitness Centres Boys and Girls Club Commercial Gyms Medical Fitness Facilities School Boards Continuing Education	Programs change frequently Patient should look for program that interests them and is suitable to their level May include costs but there may be social support programs May include costs but there may be social support programs Certification Standards Can Vary
Specific Low Impact Exercise Classes	Tai Chi Yoga Pilates Nordic Walking AquaFit	Look for classes for back pain, arthritis or fibromyalgia Suggest introductory level Patient should advise instructor of their back pain (most instructors will offer accommodations)
National Organizations for Medical Exercise	e.g. Walk With a Doc WalkWithADoc.org	Free Searchable database for local chapters
Personal Trainers	e.g. American College of Sports Medicine Exercise Professionals	Look for personal trainers in your community with the Exercise is Medicine® or HeartWise credential, clinical exercise certifications, or advanced training in working with specific medical conditions or older populations, etc.
Local Chapters of Arthritis Society or other Chronic Diseases	e.g. GLA:D Canada.	Local group exercise classes for arthritis May require referral from a Health Care Provider Some are publicly funded

Table 1 cont.: Template for Community Physical Activity Resource that Can Be Customized Locally* (See Table 2 for National Websites)

Resource	Examples	Considerations
Local Chapters of Stanford Model Chronic Disease Self Management Programs	e.g. Stanford Model	Searchable Database for Local Chapters Has workshops specific for chronic pain **If available becomes a simple one step referral that the patient can self-register for**
Local Social Prescribing Programs	e.g. Alliance for Healthier Communities	Requires partnership amongst many stakeholders to establish
Local Public Health Units	e.g. Fall Prevention Classes Other Lifestyle Risk Factor Management	

* Summarized from the Healthcare Providers' Action Guide from Exercise is Medicine® available at https://exerciseismedicine.org/assets/page_documents/HCP_Action_Guide(3).pdf

diseases. Because of the increased safety standards and the linkages to a new client groups and a national database, the Heart Wise Certification is an "easy sell" to most community programs.

Community Exercise Classes

The practitioner's concern over proper certification of exercise personnel stems from possible contraindications to exercise, especially in the cardiovascular population. Practitioners may be hesitant to refer patients to community group exercise classes for some medical problems but there are rarely any valid concerns about an exercise program for back pain. Group exercise classes offered by local community centres are a reasonable option. Tai Chi, Yoga and Aquafit are some suggestions in the evidence-based guidelines.[5]

Hesitancy in prescribing community exercise classes for back pain often relates to concerns about the possible intensity of the class, especially for patients who are deconditioned and limited by pain. The arthritis or fibromyalgia programs commonly found in Parks and Recreation brochures may be a suitable alternative for back pain patients concerned about too strenuous exercise. Arthritis Societies promote group exercise classes at a community level and municipal public health units frequently offer general

activity classes and fall prevention exercise programs.

Systematic reviews have shown that any form of exercise is beneficial for back pain.[6] Many general fitness programs such as Tai Chi and yoga do incorporate a significant back stability exercise component. Probably more important than the specific type of exercise is the need to tailor a program to the patient's preferences and interests with an emphasis on graduated progression. To this end, practitioners should familiarize themselves with the options in their community, the community centres, municipal Parks and Recreation programs and offerings from the public health units. Table 2 provides a template.

Developing local programs requires a local champion. Considerations include type and intensity of exercise, whether or not it is geared to specific health conditions, certification of instructor, location, costs and schedules. Programs change frequently and it may be beyond the capacity of the primary care practitioner to stay up to date. However, the goal should be to help facilitate patient self-management by directing individuals toward possible options. Additional models, which take a more formal approach to facilitate self-management, have been developed, can be easily implemented, and are now available in many communities.

The Stanford Model for Chronic Disease Self-Management Program (CDSMP)

In the 1990s, the Stanford Patient Education Research Center created the Chronic Disease Self-Management Program (CDSMP). Their goal was to test the hypothesis that people with comorbid conditions would benefit more when placed in a non-specific intervention than in a disease-specific intervention.[7] Even though each chronic disease has unique manifestations, the challenges could be handled with shared management practices.[8] The program was developed based on the theory of self-efficacy, which posits that one's confidence in achieving a desired behaviour predicts their level of success.

The self-management component of the CDSMP emphasizes patient responsibility to actively identify and solve problems associated with their illness.[8] The meetings are typically held in a community setting such as a library or community health centre and are facilitated by two lay individuals with chronic diseases who have previously undergone a four-day training program. Workshops, led by the facilitators, generally consist of weekly meetings with a group of 10-12 patients for a period of six weeks.[9] The aim of the meetings is to help participants become more comfortable in solving problems, utilizing resources, making decisions, communicating with health-

Table 2: Useful Links to Help Identify Community Resources With Searchable Database for Local Chapters

Exercise is Medicine®	Action plan to prescribe exercise including engaging community resources Patient evaluation and prescription tool	https://www.ExerciseIsMedicine.org
Heart Wise Exercise Program	Certification program for exercise providers Searchable database of certified exercise providers across Canada	HeartWise.OttawaHeart.ca
Stanford Model for Chronic Disease Self-Management	Training for workshop providers Searchable database of workshops across North America	SelfManagementResource.com www.eblcprograms.org/evidence-based/map-of-programs
GLA:D Canada	Local group exercise classes for arthritis	GladCanada.ca
American College of Sports Medicine Exercise Professionals	Personal Trainers Certified by ACSM Searchable Database	www.acsm.org/attend-connect/profinder
Walk with a Doc	Doctor Walking Groups Searchable Database	WalkWithADoc.org

care providers and making action plans to maintain health behaviour change. Table 3 summarizes the key components of CDSMP.

The skills learned throughout the program have multiple benefits that impact the patient's life as a whole as well their relationship to the healthcare system. The CDSMP is unique because it covers a wide range of management techniques including the efficient and effective use of community resources, exercise, cognitive pain reduction techniques, the management of fear and anger, and communicating with health professionals.[10] The program leads to positive effects across multiple dimensions of quality of life such as activity and anxiety that can be impacted by chronic disease.

The program is flexible enough to allow for translation of the material to different languages and to add or remove components to

Table 3: Key Components of the Stanford Chronic Disease Self-Management Program (CDSMP) Model *
Program is held in a community setting (libraries, community health centers)
Facilitated by two trained individuals, who are lay persons with chronic diseases who have undergone a four-day training
Consist of weekly 2.5-hour meetings with a group of 10-12 individuals with chronic disease(s) for a period of six weeks
Aim is to help participants feel more comfortable in solving problems, utilizing resources, making decisions, communicating with healthcare providers, and making action plans to maintain health behavior change
*All of the components mentioned throughout the table are available on the CDSMP website at https://www.selfmanagementresource.com

tailor it to the intended group of users.[11] CDSMP has developed workshops for chronic pain. Ahn *et al.* concluded that, if the program were widely implemented, the healthcare system could save billions of dollars in the management of chronic disease.[12]

Multiple studies have assessed the CDSMP to determine its effectiveness in improving participants' overall health status. Lorig *et al.* conducted the first randomized controlled trial (RCT) to evaluate changes in health behaviours, health status, and health service utilization after the completion of the CDSMP.[10] This six-month RCT contained a heterogeneous group of chronic disease patients, forty years of age or older. When compared to the control group, the researchers found that those who completed the CDSMP had fewer and shorter hospital visits and an increase in weekly minutes of exercise.

Follow up research using either mixed methods or in-depth interviews have been performed.[9,13] Participant in these studies believed that attending the sessions improved their health in the immediate and long term. More specifically, studies showed an increase in motivation, self-confidence, habitual exercise, an improved sense of social connection, and improved coping skills. A real-world pre-post cohort study concluded that participating in the CDSMP produced significant improvement in health behaviours, such as increased duration and frequency of exercise, self-efficacy, symptom management, better communications with physicians and a reduction in the number of hospital visits.[14]

A meta-analysis of RCTs and longitudinal studies of participants

in the CDSMP showed significant improvements in self-efficacy, disease self- management, and symptoms, as well as decreased social limitations.[15] This evidence has led many jurisdictions across North America to invest in CDSMP for their communities.

Social Prescribing

Social Prescribing is a novel approach that aims to complement primary care through a partnership between the volunteer sector and primary care resources.[16,17] The intention of Social Prescribing is to address the social factors determining the patients' health without defining the exact parameters of support. It is an attempt to provide multifaceted, non-medical support. Examples include art therapy, exercise classes, and employment and legal advice.[16] The goal is not only to direct patients to appropriate community services but also to facilitate their self-management through coaching.[22]

Table 4 describes six models of Social Prescribing.[18] Regardless of model, the goal is to have the medical team work in collaboration with Social Prescribing navigators to connect patients with appropriate non-medical support.[19] By allowing the physicians to focus on the medical care while the navigators facilitate access to beneficial non-medical services, the process is cost-effective.[20]

Social Prescribing began in the 1990s in the United Kingdom in order to reduce the costs faced by the healthcare system and to alleviate pressure experienced by physicians at their clinics. This concept has recently been launched in Canada and the United States. Using the trust built through the physician-patient relationship, physicians are able to guide their patients towards activities that promote health and wellbeing in ways that cannot be accomplished through standard medical appointments.[16,20]

Despite the concept being relatively new, there have been multiple studies indicating numerous benefits. A pilot program implemented in Ontario suggests that those who were referred to Social Prescribing showed an increased sense of community belonging, better ability to self-manage their physical conditions and improvement in mental health.[21] Referral to Social Prescribing reduced the numbers of repeat visits to medical clinics.[21] The authors of the Ontario study noted that facilitating self-management using the offered non-medical services was a major reason for the observed benefits. Similar results of improved resiliency, self confidence and health-related behaviours (better eating habits and weight loss) were shown in a qualitative study performed in the United Kingdom.[23] Finally, a randomized controlled trial compared the outcome between a con-

Table 4: Models of Social Prescribing (Brandling 2009)

Model	Description
Information Service	An information service only with display boards and directory access. There is no face-to-face contact.
Information and Telephone Line	Leaflets and notice boards advertise the service; patients self-initiate a telephone discussion with a worker. No face to face contact.
Primary Care Referral	Primary health care workers assess patients and refer to a SP service. This is based upon an appointment leading onto nonclinical issues.
Practice Based Generic Referral Worker	Clinics are held in general practice and patients can be referred by health workers or self-refer. There may be a process of triage and signposting.
Practice Based Specialist Referral Worker	The specialist works from primary care practices but may offer specific services. Direct advice may be offered as well as referral or signposting onwards.
Nonprimary Care Based	Referrals from practice-based staff are sent to a referral centre which could be an outreach service, set in the community, offering a one to one service.

trol group and patients referred to the Amalthea Project (an organization that facilitates contact between healthcare providers and volunteer services similar to Social Prescribing). Results indicated that those referred to the Project showed less anxiety, a sense of improved quality of life and a significantly enhanced ability to carry out day-to-day activities.[24]

According to the Alliance for Healthier Community's Final Report on the Social Prescribing program in Ontario, in order to ensure a successful program, there has to be a robust team of healthcare providers and volunteers.[21] In addition, five key components must be present: a client, a prescriber, a navigator, a social prescription, and a data pathway. The client with social or community challenges is referred to a navigator. Navigators, who may have a variety of professional backgrounds, work with the client to connect them with social prescriptions. A data pathway enables further research to learn from outcomes and implement positive changes.[22]

Discussion

The concept of engaging community resources to manage back pain is attractive for many reasons

SUMMARY OF KEY POINTS

Many aspects of back management such as exercise and promotion of self-management are more suited for a community model of care.

Physicians and other health care providers are important catalysts for change and must support patient engagement.

Health care practitioners should identify resources within their community as well as develop their own local creative solutions.

CME

Post-test Quiz

Members of the College of Family Physicians of Canada may claim MAINPRO-M2 Credits for this unaccredited educational program.

including potential cost savings, promotion of self-management, increased time for medical professionals to focus on the medical aspects of care, improved patient outcomes, and lifestyle risk reduction. At this time, there is limited evidence of cost-effectiveness to justify investments in these programs. Further research is needed to evaluate of this approach in the back pain population. Finally, this discussion involves first world health care; community resources in lower income countries are likely quite different.

Conclusion

Treating back pain often requires a multifaceted approach. Many aspects of care such as exercise and promotion of self-management are better suited to community level interventions. Physicians and other health care providers should support patient engagement and serve as catalysts for change within their communities. Evidence-supported models for instituting community level involvement exist and are being implemented. Health care practitioners are encouraged to identify existing resources but also to develop their own creative solutions for their local needs.

References

1. Traeger AC, Buchbinder R, Elshaug AG, Croft PR, Maher CG. Care for low back pain: can health systems deliver? Bull World Health Organ. 2019;97(6):423-433. doi:10.2471/BLT.18.226050
2. Nasser MJ. HOW TO APPROACH THE PROBLEM OF LOW BACK PAIN: AN OVERVIEW. J Family Community Med. 2005;12(1):3-9.
3. Health Quality Ontario. Low Back Pain: Care for Adults With Acute Low Back Pain. Published online 2018:43.
4. Haussmann A, Gabrian M, Ungar N, et al. What hinders healthcare professionals in promoting physical activity towards cancer patients? The influencing role of healthcare professionals' concerns, perceived patient characteristics and perceived structural factors. European Journal of Cancer Care. 2018;27(4):e12853. doi:10.1111/ecc.12853

CLINICAL PEARL

Evidence-supported models for community involvement in managing chronic diseases are available. This article provides resources enabling practitioners to identify these programs in their community and tailor them for their back pain patients.

5. Qaseem A, Wilt TJ, McLean RM, Forciea MA, Clinical Guidelines Committee of the American College of Physicians. Noninvasive Treatments for Acute, Subacute, and Chronic Low Back Pain: A Clinical Practice Guideline From the American College of Physicians. Ann Intern Med. 2017;166(7):514-530. doi:10.7326/M16-2367
6. Wewege MA, Booth J, Parmenter BJ. Aerobic vs. resistance exercise for chronic non-specific low back pain: A systematic review and meta-analysis. J Back Musculoskelet Rehabil. 2018;31(5):889-899. doi:10.3233/BMR-170920
7. Lorig K. Chronic disease self-management program: insights from the eye of the storm. Front Public Health. 2015;2:253-253. doi:10.3389/fpubh.2014.00253
8. Grady PA, Gough LL. Self-management: a comprehensive approach to management of chronic conditions. Am J Public Health. 2014;104(8):e25-e31. doi:10.2105/AJPH.2014.302041
9. Hudon C, Chouinard M-C, Diadiou F, Bouliane D, Lambert M, Hudon É. The Chronic Disease Self-Management Program: the experience of frequent users of health care services and peer leaders. Fam Pract. 2016;33(2):167-171. doi:10.1093/fampra/cmw007
10. Lorig KR, Sobel DS, Stewart AL, et al. Evidence Suggesting That a Chronic Disease Self-Management Program Can Improve Health Status While Reducing Hospitalization: A Randomized Trial. Medical Care. 1999;37(1):5-14.
11. Franek J. Self-management support interventions for persons with chronic disease: an evidence-based analysis. Ont Health Technol Assess Ser. 2013;13(9):1-60.
12. Ahn S, Basu R, Smith ML, et al. The impact of chronic disease self-management programs: healthcare savings through a community-based intervention. BMC Public Health. 2013;13:1141-1141. doi:10.1186/1471-2458-13-1141
13. Johnston S, Irving H, Mill K, Rowan MS, Liddy C. The patient's voice: an exploratory study of the impact of a group self-management support program. BMC Fam Pract. 2012;13:65-65. doi:10.1186/1471-2296-13-65
14. Lorig K, Sobel DS, Ritter P, Hobbs M. Effect of a Self-Management Program on Patients with Chronic Disease. 2001;4(6):256-262.
15. Brady TJ, Murphy L. CENTERS FOR DISEASE CONTROL AND PREVENTION. Published online 2011:30.
16. Pescheny JV, Pappas Y, Randhawa G. Facilitators and barriers of implementing and delivering social prescribing services: a systematic review. BMC Health Serv Res. 2018;18(1):1-14. doi:10.1186/s12913-018-2893-4
17. South J, Higgins TJ, Woodall J, White SM. Can social prescribing provide the missing link? PHC. 2008;9(04):310-318. doi:10.1017/S146342360800087X
18. Brandling J, House W. Social prescribing in general practice: adding meaning to medicine. Br J Gen Pract. 2009;59(563):454-456. doi:10.3399/bjgp09X421085
19. Social Prescribing in Ontario Progress Report. Accessed October 16, 2020. https://www.allianceon.org/sites/default/files/documents/Rx-Community-Progress-Report-EN-June2019-web.pdf
20. Husk K, Blockley K, Lovell R, et al. What approaches to social prescribing work, for whom, and in what circumstances? A realist review. Health & Social Care in the Community. 2019;28(2):309-324. doi:10.1111/hsc.12839
21. Social Prescribing in Ontario Final Report. Accessed October 16, 2020. https://cdn.ymaws.com/aohc.site-ym.com/resource/group/e0802d2e-298a-4d86-8af5-21156f9c057f/rxcommunity_final_report_mar.pdf
22. Husk K, Elston J, Gradinger F, Callaghan L, Asthana S. Social prescribing: where is the evidence? Br J Gen Pract. 2019;69(678):6-7. doi:10.3399/bjgp19X700325
23. Moffatt S, Steer M, Lawson S, Penn L, O'Brien N. Link Worker social prescribing to improve health and well-being for people with long-term conditions: qualitative study of service user perceptions. BMJ Open. 2017;7(7). doi:10.1136/bmjopen-2016-015203
24. Grant C, Goodenough T, Harvey I, Hine C. A randomised controlled trial and economic evaluation of a referrals facilitator between primary care and the voluntary sector. BMJ. 2000;320(7232):419-423. doi:10.1136/bmj.320.7232.419
25. Layne EI, Roffey DM, Coyle MJ, Phan P, Kingwell SP, Wai EK. Activities performed and treatments conducted before consultation with a spine surgeon: are patients and clinicians following evidence-based clinical practice guidelines? Spine J. 2018; 18(4): 614-9